

	<b>School of Arts &amp; Science – Mathematics Department</b> <b>MATH 216 – 001 (Applied Statistics)</b> <b>WINTER 2011</b>
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The Approved Course Description is available on the web at <http://camosun.ca/learn/calendar/current/web/math.html>

### 1. Instructor Information

(a)	Instructor:	Susan Chen
(b)	Location:	E260
(c)	Phone:	250-370-3497
(d)	Email:	<a href="mailto:chen@camosun.bc.ca">chen@camosun.bc.ca</a>
(e)	Webpage:	<a href="http://sites.google.com/site/susanstats/">http://sites.google.com/site/susanstats/</a>
(f)	Desire2Learn page	<a href="http://online.camosun.ca/">http://online.camosun.ca/</a>
(g)	Office Hours:	10:30 – 11:30 AM Monday – Friday

### 2. Intended Learning Outcomes

The prerequisite is Math 12 or assessment. Upon completion of this course you should be able to:

1. Compute and interpret descriptive statistics.
2. Perform calculations that apply the basic properties and concepts of probability.
3. Make statistical inferences for one population and two populations.
4. Make statistical inferences for more than two populations (ANOVA).
5. Apply the technique of linear regression in circumstances where appropriate and assess the usefulness of a linear model in these situations using the concept of correlation.
6. Apply basic methods to analyze categorical data.
7. Use the statistical software MINITAB to perform basic data analysis.

### 3. Required Materials

(a)	<b>Texts</b>	<b>Textbook:</b> Introduction to the Practice of Statistics (6 <sup>th</sup> edition), Moore, McCabe and Craig. Freeman, 2009. <b>Lab Manual:</b> Math 216 Lab Manual, Calver, Chen and Salloum.
(b)	<b>Other</b>	A Sharp EL-531 Scientific Calculator. <i>No other calculators are allowed for tests and the final examination.</i>

### 4. Course Content

Looking at Data - Distributions	1.1 – 1.3
Looking at Data – Relationships	2.1 – 2.5
Producing Data	3.1 – 3.4
Probability – The Study of Randomness	4.1 – 4.5
Sampling Distributions	5.1 – 5.2 and Poisson handout
Introduction to Inference	6.1 – 6.3
Inference for Distributions	7.1 – 7.2
Inference for Proportions	8.1 – 8.2
Analysis of Two-Way Tables	9.1 – 9.4
Inference for Regression	10.1
Analysis of Variance	12.1

**Desire2Learn (D2L):** This class has the assistance of D2L, an online course management system. Every student registered for this class has access to D2L.

**Login Site:** <http://online.camosun.ca>.

**Username:** **firstname.lastname-date-of-birth.**

**Password:** **MMDDYY** of your birthdate *if this is the first time for you to use D2L.*

*If you have used D2L at Camosun College before, then your password is the same as the last time you had used.*

**For example, John Smith** (born on March 7, 1991) has username **john.smith07** and password **030791**.

All course related materials, such as slides, practice tests and their answers, marks, and announcements will be available on D2L. It is your responsibility to check it regularly.

**Minitab Labs:** This course includes 7 lab sessions. You will need the lab manual for each lab, except for the Lab Intro. The lab manual is posted on D2L. The labs will be held in the computer lab E115 on the following Fridays: **January 14, January 21, February 4, February 18, March 18, and April 1**. The labs are designed to familiarize you with the use of a computer as a tool for statistical analysis. The computer software we use is Minitab 16. Each lab session includes a lab assignment to be submitted 6 days after your lab day. There will be a lab final exam in the last week of classes. *Please note that Minitab can be accessed in all GP labs and the Learning Commons.*

**Homework Assignments:** *"I hear, I forget. I do, I understand."* There will be several homework assignments. Your homework should be neat and stapled. **Late assignments will not be accepted.** There will also be a set of **suggested problems** from the textbook. Answers for most of these problems are in the back of the textbook, and full solutions for all suggested problems will be posted on D2L. In order to get a full understanding of the course materials you need to do both sets of homework.

***The key for getting a full understanding (and therefore a good grade) in a Statistics course is to do homework after every class and to keep up consistently. Cramming does not work for this course, unfortunately.***

**Attendance:** *Attendance is required.* Showing up to class is the easiest and most important thing you can do to help succeed the course. Keeping up is an essential part of any statistics course as much of the material builds on itself. If you feel yourself falling behind at any point during the term, then please do not hesitate to come speak to me. ***Only Students with good attendance will be eligible for the "100% final" option.***

**Math Lab:** Math lab **E224** is staffed with instructional assistants available for **free** help. It is a great idea to do your homework there and get help whenever needed.

**Practice Tests:** There will be a practice test session on the day before each test. Students are encouraged to ask questions and to work together with peers during these sessions. Solutions for these practice tests will be posted on D2L after each session. *You would benefit most from these practice tests if you come to the practice tests with the notes reviewed, all homework problems completed, and a formula sheet made.*

## 5. Basis of Student Assessment (Weighting)

Score 1		Score 2	
Assignments / Labs	15%	Lab Final	10%
Tests (50 min each)	35%	Cumulative Final Exam (3 hrs)	90%
Lab Final	10%		
Cumulative Final Exam (3 hrs)	40%		

To earn an A+ in the course, you must obtain at least 90% on both Score 1 and Score 2. For all other grades, your course grade will be the higher of Score 1 and Score 2 if all homework and lab assignments have been completed in a satisfactory manner and your attendance has been excellent; otherwise, your course grade will be Score 1. *Note that in order to pass this course (D or higher), you must obtain a final examination score of 40% or higher.*

Please refer to the **Pace Schedule** for tentative *test dates* and lab assignments and homework *due dates*.

**All tests must be written during the scheduled times. In the event that you missed a test due to family emergency or illness, the weight of the test will be put on the final exam if a note (email or paper) has been sent to the instructor before the test time. NO late assignments or lab assignments will be accepted for credit. Final examinations will be scheduled by the college and they will take place during April 18-21 & 26-29. You must be available to write the final examination at the scheduled time.**

## 6. Awards

Among other Mathematics awards, we now have a Statistics Award (\$500). You can find out more information about the awards on this page: <http://camosun.ca/learn/programs/math/scholarships.html>.

## 7. Grading System

Percentage grades will be converted to letter grades as follows:

A+	[90, 100]	B+	[77, 80]	C+	[65, 70]	F	[0, 50)
A	[85, 90)	B	[73, 77)	C	[60, 65)		
A-	[80, 85)	B-	[70, 73)	D	[50, 60)		

## 8. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School administration Office, at Student Services and on the College web site in the Policy Section. There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services or the College web site at [camosun.bc.ca](http://camosun.bc.ca).